

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of the claims in the application:

Listing of claims:

1-2. (Canceled).

3. (Currently Amended) The device of claim [[2]] 9, wherein the first organic layer consists essentially of the first and second organic materials, and the second organic layer consists essentially of the first and second organic materials.

4. (Currently Amended) ~~The device of claim 2, wherein An organic device, comprising:~~

a first electrode;

a second electrode;

a first organic layer disposed between the first electrode and the second electrode, the first organic layer further comprising:

a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;

a second organic material, wherein the first organic layer comprises less than 50% molar of the second organic material;

a second organic layer disposed between the first electrode and the second electrode, the second organic layer further comprising:

the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material;

the first organic material, wherein the second organic layer comprises less than 50% molar of the first organic material,

wherein:

the first organic layer is an n-type layer, wherein the first organic material is a host and the second organic material is an n-type dopant,

the second organic layer is a p-type layer, wherein the second organic material is a host and the first organic material is a p-type dopant, and

the first organic material is PTCDA, and wherein the second organic material is BTQBT.

5. (Currently Amended) ~~The device of claim 2, wherein An organic device, comprising:~~

a first electrode;

a second electrode;

a first organic layer disposed between the first electrode and the second electrode, the first organic layer further comprising:

a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;

a second organic material, wherein the first organic layer comprises less than 50% molar of the second organic material;

a second organic layer disposed between the first electrode and the second electrode, the second organic layer further comprising:

the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material;

the first organic material, wherein the second organic layer comprises less than 50% molar of the first organic material,

wherein:

the first organic layer is an n-type layer, wherein the first organic material is a host and the second organic material is an n-type dopant,

the second organic layer is a p-type layer, wherein the second organic material is a host and the first organic material is a p-type dopant, and

the first organic material is F16-CuPc, and wherein the second organic material is BTQBT.

6. (Currently Amended) ~~The device of claim 2, wherein An organic device, comprising:~~

a first electrode;

a second electrode;

a first organic layer disposed between the first electrode and the second electrode, the first organic layer further comprising:

a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;

a second organic material, wherein the first organic layer comprises less than 50% molar of the second organic material;

a second organic layer disposed between the first electrode and the second electrode, the second organic layer further comprising:

the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material;

the first organic material, wherein the second organic layer comprises less than 50% molar of the first organic material,

wherein:

the first organic layer is an n-type layer, wherein the first organic material is a host and the second organic material is an n-type dopant,

the second organic layer is a p-type layer, wherein the second organic material is a host and the first organic material is a p-type dopant, and

the first organic material is F16-CuPc, and wherein the second organic material is CuPc.

7. (Currently Amended) The device of claim [[2]] 4, wherein the device is an organic light emitting device, and wherein the device further comprises an emissive layer disposed between the n-type layer and the p-type layer.

8. (Currently Amended) The device of claim [[2]] 9, wherein the first organic material is an organic small molecule material, and wherein the second organic material is an organic small molecule material.

9. (Currently Amended) The device of claim 2, wherein An organic device, comprising:

a first electrode;

a second electrode;

a first organic layer disposed between the first electrode and the second electrode, the first organic layer further comprising:

a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;

a second organic material, wherein the first organic layer comprises less than 50% molar of the second organic material;

a second organic layer disposed between the first electrode and the second electrode, the second organic layer further comprising:

the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material;

the first organic material, wherein the second organic layer comprises less than 50% molar of the first organic material,

wherein:

the first organic layer is an n-type layer, wherein the first organic material is a host and the second organic material is an n-type dopant,

the second organic layer is a p-type layer, wherein the second organic material is a host and the first organic material is a p-type dopant, and

wherein the electron affinity of the first organic material is within about 0.4 eV of the ionization potential of the second organic material.

10. (Original) The device of claim 9, wherein the electron affinity of the first organic material is within about 0.2 eV of the ionization potential of the second organic material.

11. (Currently Amended) The device of claim [[2]] 9, wherein the first organic layer and the second organic layer are in direct contact with each other.

12. (Original) The device of claim 11, wherein the device is an organic transistor.

13. (Currently Amended) The device of claim [[2]] 9, wherein the device is an organic photosensitive device.

14. (Currently Amended) The device of claim [[1]] 9, wherein the second organic layer is disposed between the first organic layer and the second electrode.

15-16. (Canceled).

17. (Withdrawn--Currently Amended) A method of fabricating a device, comprising:
- providing a first electrode;
- co-depositing a first organic material and a second organic material to form a first organic layer over the first electrode, wherein the first organic material is present in the first organic layer at a concentration greater than at least 50% molar and the second organic material is present in the first organic layer at a concentration of less than 50% molar;
- co-depositing the first organic material and the second organic material to form a second organic layer over the first organic layer electrode, wherein the second organic material is present in the second organic layer at a concentration greater than at least 50% molar and the first organic material is present in the second organic layer at a concentration of less than 50% molar;
- depositing a second electrode over the first and second organic layers,
wherein:
- the first organic layer is an n-type layer, wherein the first organic material is a host and the second organic material is an n-type dopant,
- the second organic layer is a p-type layer, wherein the second organic material is a host and the first organic material is a p-type dopant, and
- the electron affinity of the first organic material is within about 0.4 eV of the ionization potential of the second organic material.

18-20. (Canceled).

21. (Withdrawn--Currently Amended) The method of claim [[20]] 17, wherein the electron affinity of the first organic material is within about 0.2 eV of the ionization potential of the second organic material.

22. (Currently Amended) An apparatus comprising:
- a first organic layer comprising:

a first organic material, wherein the first organic layer comprises at least 50% molar of the first organic material;

a second organic material;

a second organic layer comprising:

the second organic material, wherein the second organic layer comprises at least 50% molar of the second organic material;

the first organic material,

wherein

the second organic material is a donor molecule in the first organic layer,

the first organic material is an acceptor molecule in the second organic layer.

the electron affinity of the first organic material is within about 0.4 eV of the ionization potential of the second organic material, and

the first organic layer and the second organic layer ~~comprise~~ are part of at least one electronic device.

23. (Canceled).

24. (New) The device of claim 9, wherein the device is an organic light emitting device, and wherein the device further comprises an emissive layer disposed between the n-type layer and the p-type layer.

25. (New) The apparatus of claim 22, wherein the electron affinity of the first organic material is within about 0.2 eV of the ionization potential of the second organic material.